

Armin Schöppach:  
US Patent Application No. 10/047,150  
(Z) 99038 P US

A1  
[0011] By the measure that a mounting includes and compensation elements for a temperature-dependent change of a predetermined distance between a first and a second optical element, it is possible to compensate for a change of the position of the focal points of the optical elements due to thermal deformation by means of the mounting, in particular by means of the compensation elements. It is possible by means of the compensation elements to adapt the position of the second optical element to the new focal length of the first optical element, and vice versa. The optical system is thereby always optimally focused, independent of temperature.

A2  
[0028] In the embodiment example shown, the mounting 115 includes a telescope tube 117 arranged coaxially of the optical axis 102, and a seating 122 in the form of a holding star 123 for mounting the secondary mirror 127. The holding star 123 and the telescope tube 117 preferably consist of the identical material, to avoid stresses due to differing expansion coefficients of the materials. In the embodiment example shown, C/C SiC is provided as the material, and has a sufficient thermal conductance and very small expansion coefficients, so that in the mounting 115, temperature gradients and deformations can occur only briefly, if at all, due to a unilateral irradiation. A large quotient formed by dividing the thermal conductivity by the expansion coefficient is to be sought. The mounting 115 has a density of at most  $2.5 \times 10^3 \text{ kg/m}^3$ .